

CLAIMS

What is claimed is:

1. A method comprising:
 - obtaining a total memory bandwidth available for a time period;
 - obtaining a plurality of bandwidth requests for the time period for a plurality of isochronous devices;
 - apportioning at least a portion of the total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices.
2. The method of claim 1, further comprising:
 - determining a data transmission policy based on the power managed profile and the plurality of bandwidth requests, the data transmission policy to manage delaying transmission of a first isochronous data transmission and to manage combining data of the first isochronous data transmission with data of a second data transmission into a combined data transmission.
3. The method of claim 1, wherein obtaining a plurality of bandwidth requests includes polling a plurality of isochronous applications corresponding to the plurality of isochronous devices.
4. The method of claim 1, wherein apportioning includes dividing the total memory bandwidth into a plurality of portions of the total memory bandwidth and satisfying at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth.
5. A method comprising:
 - delaying transmission of a first isochronous data transmission having media data to be transmitted to or from a first isochronous device;
 - appending the first isochronous data transmission with a second isochronous data transmission having media data to be transmitted to or from the first isochronous device into a combined data transmission, wherein appending is performed according to a data transmission policy.

6. The method of claim 5, further comprising:
identifying a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, each combined isochronous data transmission having media data from at least two isochronous data transmissions.
7. The method of claim 6, further comprising:
selecting a time to transmit the combined data transmission, wherein selecting includes selecting one of a transmission time of an opportunistic data transmission and a transmission time of one of the plurality of combined isochronous data transmissions.
8. The method of claim 6, wherein the opportunistic data transmission comprises one of an asynchronous data transmission and a third isochronous data transmission.
9. The method of claim 5, wherein the data transmission policy reduces a first frequency of transmission times related to transmitting the first isochronous data transmission to a less frequent second frequency of transmission times related to transmitting the combined data transmission.
10. The method of claim 5, further comprising:
one of reading media data of the combined data transmission from a memory and writing media data of the combined data transmission to a memory.
11. The method of claim 5, further comprising:
delaying transmission of the second isochronous data transmission.
12. The method of claim 5, further comprising:
transmitting the combined data transmission prior to expiration of a time delay compliance limit.
13. A device comprising:
a bandwidth manager configured to apportion at least a portion of a total memory bandwidth available for a time period, amongst a plurality of bandwidth requests for the time period for a plurality of isochronous devices,

according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices.

14. The device of claim 13, wherein the bandwidth manager is coupled to the plurality of isochronous devices to manage data communication between the plurality of isochronous devices and a memory.

15. The device of claim 14, wherein a duration of the time period depends on a status of a processor.

16. The device of claim 14, wherein the plurality of isochronous devices are related to the plurality of isochronous applications run by a processor, and wherein the data rate requirements are associated with a plurality of time delay compliance limits for the plurality of isochronous devices.

17. A device comprising:

a data transmission manager configured to delay transmission of a first isochronous data transmission having media data to be transmitted to or from a first isochronous device, and to append the first isochronous data transmission with a second isochronous data transmission having media data to be transmitted to or from the first isochronous device into a combined data transmission, wherein appending is performed according to a data transmission policy.

18. The device of claim 17, wherein the data transmission policy identifies a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, and selects a time to transmit the combined data transmission between one of a transmission time of an asynchronous data transmission, a third isochronous data transmission, and a transmission time of one of the plurality of combined isochronous data transmissions.

19. The device of claim 18, wherein the third isochronous data transmission is to be transmitted to or from a second isochronous device.

20. The device of claim 17, further comprising:
one of a processor and a data bus coupled to a memory, wherein the combined data transmission is read from or written to the memory via the processor or the data bus.
21. The device of claim 17, wherein the media data of the first and second isochronous data transmission include one of digital audio data and digital video data.
22. An article of manufacture comprising:
a machine-readable medium having data therein which when accessed by a processor causes a bandwidth manager to obtain a total memory bandwidth available for a time period, obtain a plurality of bandwidth requests for the time period for a plurality of isochronous devices, and apportion the at least a portion of a total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile and a plurality of data rate requirements associated with the plurality of isochronous devices.
23. The article of manufacture of claim 22, further comprising:
data to cause the bandwidth manager to determine a data transmission policy based on the power managed profile and the plurality of bandwidth requests, the data transmission policy to delay transmission of a first isochronous data transmission and to combine data of the first isochronous data transmission with data of a second data transmission into a combined data transmission.
24. The article of manufacture of claim 22, further comprising:
data to cause the bandwidth manager to divide the total memory bandwidth into a plurality of portions of the total memory bandwidth and to satisfy at least two of the plurality of bandwidth requests each with at least one of the plurality of portions of the total memory bandwidth.
25. An article of manufacture comprising:
a machine-readable medium having data therein which when accessed by a processor causes a data transmission manager to delay transmission of a first isochronous data transmission having media data to be transmitted to or

from a first isochronous device, and to append the first isochronous data transmission with a second isochronous data transmission having media data to be transmitted to or from the first isochronous device into a combined data transmission, wherein appending is performed according to a data transmission policy.

26. The article of manufacture of claim 25, further comprising:
data to cause the data transmission manager to identify a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, each combined isochronous data transmission having media data from at least two isochronous data transmissions.

27. The article of manufacture of claim 26, further comprising:
data to cause the data transmission manager to transmit an opportunistic data transmission prior to expiration of a transmission time period, the opportunistic data transmission having media data from at least two isochronous data transmissions.

28. A system comprising:
a bandwidth manager to obtain a total memory bandwidth available from a memory for a time period, obtain a plurality of bandwidth requests for the time period for a plurality of isochronous devices, and apportion the at least a portion of the total memory bandwidth amongst the plurality of bandwidth requests according to a power managed profile;
a data transmission manager to delay transmission of a first isochronous data transmission having media data to be transmitted to or from a first of the isochronous devices, and append the first isochronous data transmission with a second isochronous data transmission having media data to be transmitted to or from the first isochronous device into a combined data transmission,
a data bus coupled between the memory and the plurality of isochronous devices, wherein the combined data transmission is read from or written to the memory via the data bus.

29. The system of claim 28, wherein the data transmission policy further:
identifies a plurality of transmission time periods during which to transmit a plurality of combined isochronous data transmissions, and selects a

time to transmit the combined data transmission between one of a transmission time of an asynchronous data transmission, a third isochronous data transmission, and a transmission time of one of the plurality of combined isochronous data transmissions.

30. The system of claim 29, wherein the data transmission policy further: transmits an opportunistic data transmission prior to expiration of a transmission time period, the opportunistic data transmission having media data from at least two isochronous data transmissions.